

UNCLASSIFIED

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)								DATE February 1999		
BUDGET ACTIVITY 5 - Engineering and Manufacturing Development				PE NUMBER AND TITLE 0604760A Distributive Interactive Simulations - Engineering Development						
COST (In Thousands)	FY1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost	19572	2727	7657	20646	31070	31862	29070	25737	Continuing	Continuing
DC73 Synthetic Theater of War	4468	0	779	1123	2205	1254	0	0	0	19658
DC74 Developmental Simulation Technology	3281	0	0	0	2797	2630	1680	1728	Continuing	Continuing
DC77 Interactive Simulation	5076	1369	4294	4756	8750	7540	6419	6258	Continuing	Continuing
DC78 Computer Generated Forces	6747	1358	2584	14767	17318	20438	20971	17751	Continuing	Continuing
<p>A. Mission Description and Budget Item Justification: Distributed Interactive Simulation (DIS) is a synthetic environment within which humans may interact through a systematic connection of different subcomponent simulations, simulators and/or instrumented live task forces. These components may be located together or distributed at geographically dispersed locations, yet can interoperate using various simulation hardware linked through use of standard communication architecture. This program element supports the Army's Advanced Simulation Program to enable operational readiness and support the development of concepts and systems for Force XXI and the Army After Next through the application of new simulation technology and techniques. This engineering development and application of simulation technology will provide the tools to electronically link all subcomponents together in a manner that is transparent to the user. The synthetic environment is used to verify the scenarios, tactics/techniques and procedures, train testers on new hardware/software and conduct trial test runs before costly live field tests. The tools developed are available for reuse by developers and users of simulations throughout the Army. Project DC73, Synthetic Theater of War, supports engineering development and integration of the Synthetic Theater of War-Architecture (STOW-A). Project DC74, Developmental Simulation Technology, provides simulator equipment upgrades, network upgrades, software upgrades, and resolves interoperability issues in support of the Army's Core DIS Facilities (CDFs) at Fort Knox, Fort Benning, Fort Rucker and the Operational Support Facility in Orlando, Florida. Project DC77, Interactive Simulation, focuses on engineering development of advanced simulation technology and tools to provide a reusable synthetic environment. The project also develops and enhances reconfigurable simulators which are used as Advanced Concepts Research Tools (ACRT) that will allow the battlelabs to accomplish their mission in support of the Advanced Concept & Requirements (ACR), Research, Development and Acquisition (RDA), and Training Exercise and Military Operations (TEMO) domains. Project DC78 develops and upgrades computer generated forces software systems which support experimentation, concept evaluation, materiel development and training. The One Semi-Automated Forces (OneSAF) program will combine and improve the functionality and behaviors of several current semi-automated forces to provide a single SAF for Army use in simulations. The Advanced Simulation Program will have benefit across the Army and DOD by providing standards for interoperability and software.</p>										
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DATE
February 1999

BUDGET ACTIVITY

5 - Engineering and Manufacturing Development

PE NUMBER AND TITLE

**0604760A Distributive Interactive Simulations -
Engineering Development**

B. Program Change Summary	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>
Previous President's Budget (<u>FY 1999 PB</u>)	20249	2766	5890	6877
Appropriated Value	20895	2766		
Adjustments to Appropriated Value				
a. Congressional General Reductions	-646	-39		
b. SBIR / STTR	-509			
c. Omnibus or Other Above Threshold Reductions	-168			
d. Below Threshold Reprogramming				
e. Rescissions				
Adjustments to Budget Years Since <u>FY 1999 PB</u>			+1767	+13769
Current Budget Submit (<u>FY 2000/2001 PB</u>)	19572	2727	7657	20646

Change Summary Explanation: FY00/01 plus up for acceleration of OneSAF Test Bed Build 5.0 and additional terrain data collection infrastructure enhancements
Funded within current Army resources.

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BUDGET ACTIVITY 5 - Engineering and Manufacturing Development				PE NUMBER AND TITLE 0604760A Distributive Interactive Simulations - Engineering Development				PROJECT DC73																								
COST (In Thousands)	FY1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost																						
DC73 Synthetic Theater of War	4468	0	779	1123	2205	1254	0	0	0	19658																						
<p>A. <u>Mission Description and Justification:</u> This project supports engineering development and integration of the Synthetic Theater of War (STOW). Development focuses on leveraging existing and emerging technology in a manner that produces substantial and continual improvements in combat readiness through the use of full spectrum, high fidelity, distributed simulation capability to support a large scale user based exercise/experiment for JOINT VENTURE training and analytical needs.</p> <p>FY 1998 Accomplishments:</p> <ul style="list-style-type: none"> • 2672 Continued development of software used to link live, virtual and constructive legacy simulations. • 1796 Developed software to support CCTT Tactical System Interface Unit interoperability within the STOW-A environment. <p>Total 4468</p> <p>FY 1999 Planned Program: Project not funded in FY 1999</p> <p>FY 2000 Planned Program:</p> <ul style="list-style-type: none"> • 779 Continue to develop the software required to link entity-based simulations and simulators to live tactical command and control systems in support of periodic releases of Army Battle Command Systems (ABCS) software. <p>Total 779</p> <p>FY 2001 Planned Program:</p> <ul style="list-style-type: none"> • 1123 Continue to develop the software required to link entity-based simulations and simulators to live tactical command and control systems in support of periodic releases of ABCS software. <p>Total 1123</p>																																
<p>B. <u>Other Program Funding Summary</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;"><u>FY 1998</u></th> <th style="text-align: center;"><u>FY 1999</u></th> <th style="text-align: center;"><u>FY 2000</u></th> <th style="text-align: center;"><u>FY 2001</u></th> <th style="text-align: center;"><u>FY 2002</u></th> <th style="text-align: center;"><u>FY 2003</u></th> <th style="text-align: center;"><u>FY 2004</u></th> <th style="text-align: center;"><u>FY 2005</u></th> <th style="text-align: center;">To <u>Compl</u></th> <th style="text-align: center;">Total <u>Cost</u></th> </tr> </thead> <tbody> <tr> <td>OPA3, KA6000, Reconfigurable Simulators</td> <td style="text-align: center;">13316</td> <td style="text-align: center;">1961</td> <td style="text-align: center;">2408</td> <td style="text-align: center;">2347</td> <td style="text-align: center;">367</td> <td style="text-align: center;">123</td> <td style="text-align: center;">122</td> <td style="text-align: center;">123</td> <td style="text-align: center;">Cont</td> <td style="text-align: center;">Cont</td> </tr> </tbody> </table>												<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	To <u>Compl</u>	Total <u>Cost</u>	OPA3, KA6000, Reconfigurable Simulators	13316	1961	2408	2347	367	123	122	123	Cont	Cont
	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	To <u>Compl</u>	Total <u>Cost</u>																						
OPA3, KA6000, Reconfigurable Simulators	13316	1961	2408	2347	367	123	122	123	Cont	Cont																						
<p>C. <u>Acquisition Strategy:</u> Development and procurement through delivery orders to competitively selected contractors based on performance specifications.</p>																																
<div style="display: flex; justify-content: space-between;"> Project DC73 Page 3 of 15 Pages Exhibit R-2A (PE 0604760A) </div>																																

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ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)								DATE February 1999		
BUDGET ACTIVITY 5 - Engineering and Manufacturing Development					PE NUMBER AND TITLE 0604760A Distributive Interactive Simulations - Engineering Development					PROJECT DC73

D. Schedule Profile	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2004</u>	<u>FY 2005</u>
Award Engr & Integration Contract	1Q*	1Q*		1Q	1Q	1Q	1Q			

*Milestone Complete

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ARMY RDT&E COST ANALYSIS (R-3)										DATE February 1999		
BUDGET ACTIVITY 5 - Engineering and Manufacturing Development					PE NUMBER AND TITLE 0604760A Distributive Interactive Simulations - Engineering Development					PROJECT DC73		

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	<u>FY 1999</u> Cost	<u>FY 1999</u> Award Date	<u>FY 2000</u> Cost	<u>FY 2000</u> Award Date	<u>FY 2001</u> Cost	<u>FY 2001</u> Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. STOW-A Development	C/CPAF	Lockheed-Martin, Orlando, FL	3104	0						0	3104	3104
b. STOW-A Requirements Analysis	C/CPIF	Cubic Applications, Ft Levensorth, KS	1290	0						0	1290	1290
c. STOW-A Development	C/CPIF	Orlando, FL	4710	0						0	4710	4710
d. CCTT TSIU Interface	C/CPIF	Coleman Research, Huntsville, AL	1796	0						0	1796	1796
e. STOW-A Software development	TBD	TBD		0		576	Dec 99	604	Dec 00	2451	3631	3631
Subtotal Product Dev:			10900			576		604		2451	14531	14531

Remark: Each award is Delivery Order (DO) against CPIF.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	<u>FY 1999</u> Cost	<u>FY 1999</u> Award Date	<u>FY 2000</u> Cost	<u>FY 2000</u> Award Date	<u>FY 2001</u> Cost	<u>FY 2001</u> Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. Miscellaneous	Various	Various	1252	0		96	Nov 99	300	Nov 00	600	2248	2248
Subtotal Support Costs:			1252			96		300		600	2248	2248

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	<u>FY 1999</u> Cost	<u>FY 1999</u> Award Date	<u>FY 2000</u> Cost	<u>FY 2000</u> Award Date	<u>FY 2001</u> Cost	<u>FY 2001</u> Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. Miscellaneous	Various	Various	789	0		0		0		0	789	789
Subtotal Test and Evaluation:			789								789	789

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	<u>FY 1999</u> Cost	<u>FY 1999</u> Award Date	<u>FY 2000</u> Cost	<u>FY 2000</u> Award Date	<u>FY 2001</u> Cost	<u>FY 2001</u> Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. Service Support	Various	Multiple	1295	0		107	Nov 99	219	Nov 00	450	2071	2071

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BUDGET ACTIVITY 5 - Engineering and Manufacturing Development					PE NUMBER AND TITLE 0604760A Distributive Interactive Simulations - Engineering Development					PROJECT DC73																									
Subtotal Mgt Services:				1295			107		219		450	2071	2071																						
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	Total PYs Cost	<u>FY 1999</u> Cost		<u>FY 2000</u> Cost		<u>FY 2001</u> Cost		Cost To Complete	Total Cost	Target Value of Contract																									
Project Total Cost:	14236			779		1123		3501	19639	19639																									
Project DC73				Page 6 of 15 Pages				Exhibit R-3 (PE 0604760A)																											

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ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)								DATE February 1999	
BUDGET ACTIVITY 5 - Engineering and Manufacturing Development				PE NUMBER AND TITLE 0604760A Distributive Interactive Simulations - Engineering Development				PROJECT DC74	

COST (In Thousands)	FY1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost
DC74 Developmental Simulation Technology	3281	0	0	0	2797	2630	1680	1728	Continuing	Continuing

A. Mission Description and Justification : **Project DC74 - Developmental Simulation Technology:** This project supports the Core Distributed Interactive Simulation (DIS) Facilities (CDF) at Fort Knox, KY, Fort Rucker, AL, Fort Benning, GA and the Operational Support Facility in Orlando, FL, which provide a virtual combined arms battlefield with the warfighter-in-the-loop to evaluate weapon system concepts, tactics, doctrine and test plans.

FY 1998 Accomplishments:

- 477 Continued development of Dismounted Warrior Network, expanding the current capabilities to include Military Operations Urban Terrain (MOUT) and C4I simulation and development of Dismounted Infantry Semi-Automated Forces (DI SAF) for future integration into Modular SAF (MODSAF).
- 294 Completed development of tools, which provide improved capabilities for exercise generation and after-action analysis.
- 2510 Successfully rehosted and upgraded both the Rotary Wing Aircraft Simulators and the M1A2 Tank simulators with low cost PC based COTS technology to increase reliability and interoperability with other simulation systems. Completed initial requirements for a Simulation/C4I Testbed capability to investigate simulation/C4I issues related to synthetic environments.

Total 3281

FY 1999 Planned Program: Project not funded in FY 1999

FY 2000 Planned Program: Project not funded in FY 2000

FY 2001 Planned Program: Project not funded in FY 2001

B. <u>Other Program Funding Summary</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>To Compl</u>	<u>Total Cost</u>
OPA3, KA6000, Reconfigurable Simulators	13316	1961	2408	2347	367	123	122	123	Cont	Cont

C. Acquisition Strategy: Competitive development leading to competitive procurement against performance specifications

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ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)								DATE February 1999																																			
BUDGET ACTIVITY 5 - Engineering and Manufacturing Development				PE NUMBER AND TITLE 0604760A Distributive Interactive Simulations - Engineering Development							PROJECT DC74																																
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D. Schedule Profile	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2004	FY 2005																																	
Advanced Distributed Simulation Technology (ADSTII) Delivery Order Contract Award	1Q*	1Q*				1Q	1Q	1Q	1Q	1Q																																	
Award DIS Simulation Engineering Integration (SEI) Contract for Distributed Interactive Simulation Exercise Construct Tool (DISECT)		1Q*																																									
Milestones Completed*																																											
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ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)								DATE February 1999		
BUDGET ACTIVITY 5 - Engineering and Manufacturing Development				PE NUMBER AND TITLE 0604760A Distributive Interactive Simulations - Engineering Development				PROJECT DC77		
COST <i>(In Thousands)</i>	FY1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost
DC77 Interactive Simulation	5076	1369	4294	4756	8750	7540	6419	6258	Continuing	Continuing

A. Mission Description and Justification: Project DC77 - Interactive Simulation: This project focuses on engineering development of techniques and Distributed Simulation technology [e.g. Higher Level Architecture (HLA)] of wide area simulation networking in support of modeling and simulation, doctrinal development, training, and operations, utilizing live, virtual and constructive simulations. Development also supports related simulations and simulator efforts, including the Battleregion Reconfigurable Simulators.

FY 1998 Accomplishments:

- 1174 Provided systems engineering and developed HLA environment and standards to support interoperability within the training domain.
- 467 Completed development of tools, which provide improved capabilities for exercise generation and after-action analysis.
- 314 Continued the development of a federation test suite, which serves as a validation tool for other simulation software developers.
- 3121 Solicited and evaluated COTS candidate Advanced Concepts Research Tools. Developed linkages and upgraded R&D tools to achieve HLA and DIS compliance and resolved interoperability issues. Awarded contract to procure the initial commercially available reconfigurable simulators from various manufacturers.

Total 5076

FY 1999 Planned Program:

- 880 Provide systems engineering and develop High Level Architecture environment and standards to support interoperability within the training domain.
- 469 Develop the software required to link entity-based simulations and simulators to live tactical command and control systems in support of periodic releases of Army Battle Command Systems (ABCS) software in support of STOW-A.
- 20 Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) Programs

Total 1369

FY 2000 Planned Program:

- 3250 Award contract modification to integrate additional ground and aviation full fidelity Advanced Concepts Research Tools (ACRT) at the Core DIS facilities. Award contract modification to develop and acquire C4I variants of the ACRT.
- 1044 Continue development of High Level Architecture technology and tools to support Simulation Object Modeling, Federation Object Model development and federation exercise management, data collection and after action review, and HLA compliance tools.

Total 4294

Project DC77

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ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)								DATE February 1999			
BUDGET ACTIVITY 5 - Engineering and Manufacturing Development					PE NUMBER AND TITLE 0604760A Distributive Interactive Simulations - Engineering Development					PROJECT DC77	
FY 2001 Planned Program: <ul style="list-style-type: none"> • 3250 Continue integration of ground and aviation full fidelity Advanced Concepts Research Tools (ACRT) at the Core DIS facilities and develop and acquire C4I variants of the ACRT. • 1506 Continue development of High Level Architecture technology and tools to support Simulation Object Modeling, Federation Object Model development and federation exercise management, data collection and after action review, and HLA compliance tools. <p>Total 4756</p>											
B. <u>Other Program Funding Summary</u>		<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	To <u>Compl</u>	Total <u>Cost</u>
OPA3, KA6000, Reconfigurable Simulators		13316	1961	2408	2347	367	123	122	123	Cont	Cont
C. <u>Acquisition Strategy:</u> Competitive development leading to competitive procurement against performance specifications.											
D. <u>Schedule Profile</u>		<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2004</u>	<u>FY 2005</u>
Advanced Distributed Simulation Technology II Delivery Order Contract Awarded		1Q*	1Q*	1Q*	1Q	1Q	1Q	1Q	1Q	1Q	1Q
Milestone Completed*											
Project DC77		Page 10 of 15 Pages					Exhibit R-2A (PE 0604760A)				

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ARMY RDT&E COST ANALYSIS (R-3)

DATE

February 1999

BUDGET ACTIVITY

5 - Engineering and Manufacturing Development

PE NUMBER AND TITLE

**0604760A Distributive Interactive Simulations -
Engineering Development**

PROJECT

DC77

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. Battlelab Reconfigurable Simulator development	C/CPIF	Hughes Training Inc., Orlando, FL	4144	0	0	0	0	0	0	0	4144	4144
b. ACRT Development and Integration	C/CPAF	NAWC-TSD Orlando, FL	2661	0	0	3250	Dec 99	3250	Dec 00	Cont	9161	Cont
c. DISECT Development	C/CPIF	TASC, Orlando, FL	464	0		0		0		Cont	464	Cont
d. HLA Tool Development	Various	Various	3228	1217	Nov 98	896	Nov 99	1329	Nov 00	Cont	6670	Cont
Subtotal Product Development:			10497	1217		4146		4579			20439	Cont

Remark: Battlelab Reconfigurable Simulator Program replaced by ACRT. Contract awards are Delivery Orders (DO) against CPIF.

II. Support Costs: Not Applicable. Each award is DO of CPIF.

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. ModSAF V&V	Various	Various	285							0	285	285
Subtotal Test and Evaluation:			285								285	285

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. HLA Tools program mgt	Various	Various	271	152	Nov 98	148	Nov 99	177	Nov 00	Cont	748	Cont
Subtotal Management Services:			271	152		148		177			748	Cont

Project Total Cost:			11053	1369		4294		4756			21472	Cont
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Project DC77

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Exhibit R-3 (PE 0604760A)

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ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)								DATE February 1999	
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COST (In Thousands)	FY1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost
DC78 Computer Generated Forces	6747	1358	2584	14767	17318	20438	20971	17751	Continuing	Continuing

A. Mission Description and Justification: This project provides for the development of software systems to realistically represent activities of units and forces in simulation. This representation is used to support concept evaluation, experimentation, materiel acquisition and training communities. This project funds improvements, new functionality, enhancements and re-architecture of ModSAF. Other initiatives include the systems engineering and design for improvements to the architecture and interoperability of Army SAFs, and the evolution to an Army universal computer generated forces system, OneSAF. OneSAF is a composable next generation SAF which will represent a full range of operations, systems and control processes for support of training research, development and acquisition simulation applications including human-in-the-loop.

FY 1998 Accomplishments:

- 500 Developed and integrated expansion of ModSAF battlefield operating systems representation/upper echelon behavior capabilities.
- 1540 Established the Integrated Product Team and developed the technical requirements, acquisition planning and concept for OneSAF.
- 4364 Continued development of the OneSAF architecture to provide for composability and HLA compliance; incorporated ModSAF v4.0 functionality; and initiated development of OneSAF Testbed Baseline (OTB) Build 1.0.
- 343 Verified and validated newly integrated software.

Total 6747

FY 1999 Planned Program:

- 300 Continue the development of the OneSAF architecture to provide composability, HLA compliance and repeatability
- 240 Continue OneSAF requirements definition.
- 604 Complete development of OTB Build 1.0, integrate functionality of ModSAF V5.0, and initiate development of OTB Builds 2.0 and 3.0/4.0.
- 180 Verification and validation of newly integrated software.
- 34 Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) Programs

Total 1358

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ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)								DATE February 1999																																																																			
BUDGET ACTIVITY 5 - Engineering and Manufacturing Development					PE NUMBER AND TITLE 0604760A Distributive Interactive Simulations - Engineering Development			PROJECT DC78																																																																			
<p>FY 2000 Planned Program:</p> <ul style="list-style-type: none"> • 1300 Complete development of OTB Builds 2.0 and 3.0/4.0 and initiate development of OTB Build 5.0 • 457 Complete development and issue OneSAF Version 1.0 (Alpha) for initial use, replacing ModSAF, and initiate development of Version 2.0. • 592 Continue development of the OneSAF synthetic natural environment and architecture development for scalability. • 235 Verification and validation of newly integrated software. <p>Total 2584</p> <p>FY 2001 Planned Program:</p> <ul style="list-style-type: none"> • 6995 Complete development of OTB Build 5.0 and continue development of Version 2.0. • 6987 Develop functionality to represent composable behaviors, opposing forces and provide terrain, editing and data collection tools and OneSAF infrastructure enhancements. • 785 Verification and validation of newly integrated software. <p>Total 14767</p> <p>B. <u>Other Program Funding Summary:</u> No other related funding</p> <p>C. <u>Acquisition Strategy:</u> Competitive development leading to competitive procurement against performance specifications.</p> <table border="1" style="width:100%; border-collapse: collapse; margin-top: 10px;"> <tr> <th style="text-align: left;">D. <u>Schedule Profile</u></th> <th><u>FY 1997</u></th> <th><u>FY 1998</u></th> <th><u>FY 1999</u></th> <th><u>FY 2000</u></th> <th><u>FY 2001</u></th> <th><u>FY 2002</u></th> <th><u>FY 2003</u></th> <th><u>FY 2004</u></th> <th><u>FY 2004</u></th> <th><u>FY 2005</u></th> </tr> <tr> <td>ADST II Delivery Order Contract Award</td> <td align="center">1Q*</td> <td align="center">1Q*</td> <td align="center">1Q*</td> <td align="center">1Q</td> <td align="center">1Q</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Test Bed Build 3.0 Complete</td> <td></td> <td></td> <td></td> <td align="center">3Q</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Version 1.0 Alpha Release</td> <td></td> <td></td> <td></td> <td align="center">4Q</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Award OneSAF New Competitive Development Contract</td> <td></td> <td></td> <td></td> <td></td> <td align="center">2Q</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Verification & Validation performed on continuous basis. 1st Qtr annual award.</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td align="center">1Q</td> <td align="center">1Q</td> <td align="center">1Q</td> <td align="center">1Q</td> <td align="center">1Q</td> </tr> </table> <p>Milestone Completed*</p> <div style="margin-top: 20px; display: flex; justify-content: space-between;"> Project DC78 Page 13 of 15 Pages Exhibit R-2A (PE 0604760A) </div>										D. <u>Schedule Profile</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2004</u>	<u>FY 2005</u>	ADST II Delivery Order Contract Award	1Q*	1Q*	1Q*	1Q	1Q						Test Bed Build 3.0 Complete				3Q							Version 1.0 Alpha Release				4Q							Award OneSAF New Competitive Development Contract					2Q						Verification & Validation performed on continuous basis. 1 st Qtr annual award.						1Q	1Q	1Q	1Q	1Q
D. <u>Schedule Profile</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2004</u>	<u>FY 2005</u>																																																																	
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ARMY RDT&E COST ANALYSIS (R-3)										DATE February 1999		
BUDGET ACTIVITY 5 - Engineering and Manufacturing Development					PE NUMBER AND TITLE 0604760A Distributive Interactive Simulations - Engineering Development					PROJECT DC78		

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. ModSAF enhancement	C/CPAF	Lockheed-Martin Inc., Orlando, FL	500	0		0		0		Cont	500	Cont
b. OneSAF Systems architecture/development	C/CPAF	Lockheed-Martin Inc., Orlando, FL	2685	372	Nov 98	1500	Nov 99	3675	Nov 00	Cont	8232	Cont
c. OneSAF Systems architecture/development	Various	Various	2439	316	Dec 98	332	Dec 99	845	Dec 00	Cont	3932	Cont
d. OneSAF System Dev	C/CPAF	TBD						8602	Jan 01	Cont	8602	Cont
Subtotal Product Dev:			5624	688		1832		13122			21266	Cont

Remark: New Competitive Contract for OneSAF Development. Each award is DO against CPAF.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. Systems analysis	Various	Various	405	210	Dec 98	225	Dec 99	460	Dec 00	Cont	1300	Cont
Subtotal Support Costs:			405	210		225		460			1300	Cont

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. Verification & Validation	Various	Various	343	180	Nov 98	235	Nov 99	785	Nov 00	Cont	1543	Cont
Subtotal Test and Evaluation:			343	180		235		785			1543	Cont

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. Program management	Various	Various	375	280	Nov 98	292	Nov 99	400	Nov 00	Cont	1347	Cont
Subtotal Mgmt Services:			375	280		292		400			1347	Cont

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ARMY RDT&E COST ANALYSIS (R-3)

DATE

February 1999

BUDGET ACTIVITY

5 - Engineering and Manufacturing Development

PE NUMBER AND TITLE

0604760A Distributive Interactive Simulations -
Engineering Development

PROJECT

DC78

	Total PYs Cost	<u>FY 1999</u> Cost		<u>FY 2000</u> Cost		<u>FY 2001</u> Cost		Cost To Complete	Total Cost	Target Value of Contract
Project Total Cost:	6747	1358		2584		14767			25456	Cont

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